

SYSTEM FOR ENCODING AND TRANSMITTING DATA

ABSTRACT OF THE DISCLOSURE

An encoding system for encoding digital data for transmission through a communication channel is described, which includes a DCF encoder and a parity encoder operatively coupled to the DCF encoder. The DCF encoder is adapted to receive a first data sequence, and to generate a first DCF code word and a new running digital sum as functions of the first data sequence and a pre-existing running digital sum, wherein the new running digital sum is limited to a maximum absolute value. The parity encoder is operatively coupled to the DCF encoder, and adapted to receive the first DCF code word from the DCF encoder, and to generate a first interleaved parity code word as a function of the first DCF code word, and to provide the first interleaved parity code word to a channel.